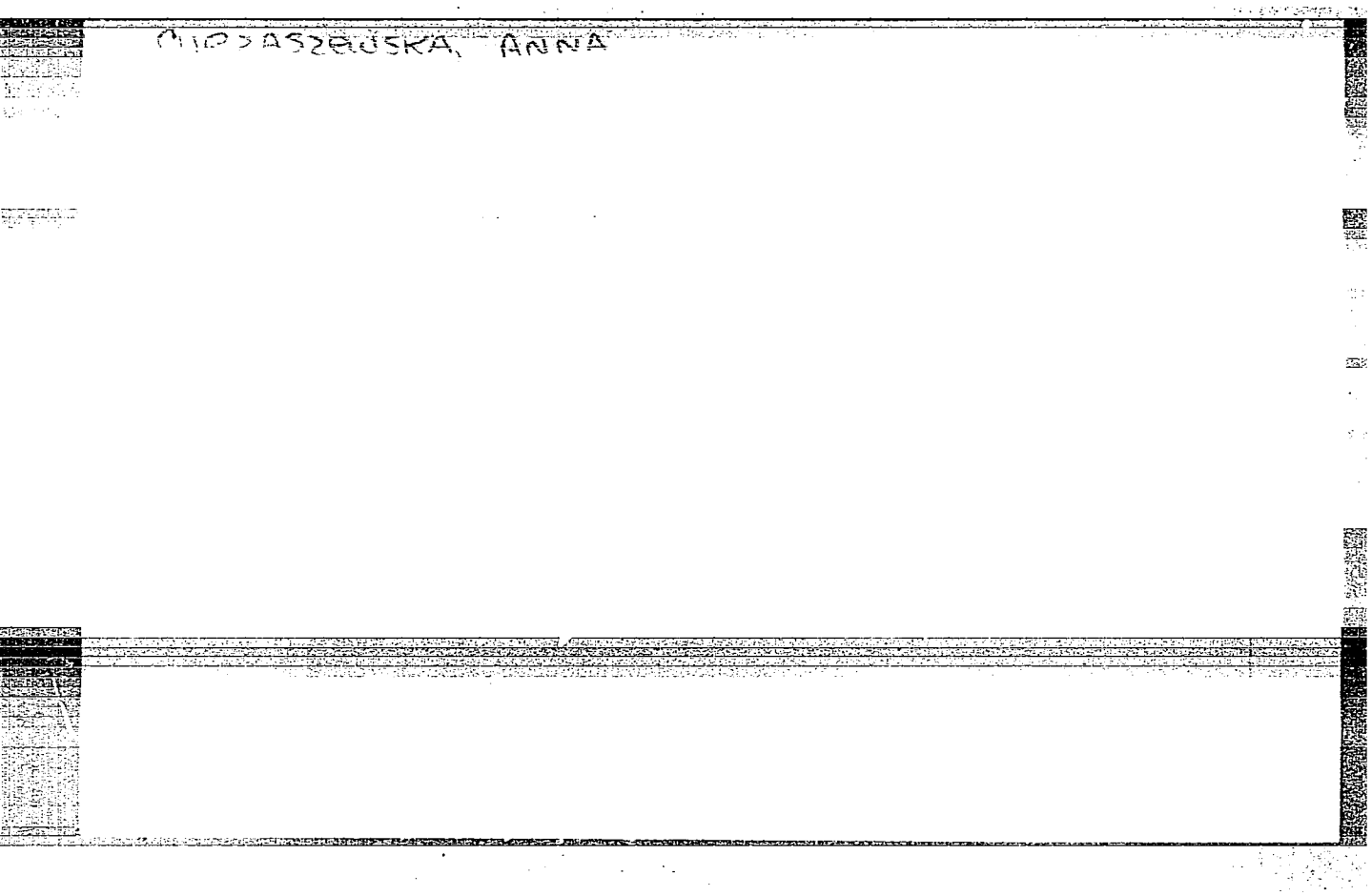


APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509010020-4"

POLAND / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour : RZhKhim., No 10, 1958, No 32446

Author : A. Chrzaszczewska, J. Kotler, W. Miecznikowska-Stolarczyk, G. Odor, S. Pizoni.

Inst : Lodzkie towarz. naug.

Title : Arylsulfonyl Derivatives of 2,4-Diaminotoluene.

Orig Pub : Acta chim. Lodskie towarz. nauk., 1956, 2, 79-85

Abstract : The acylation reaction of 2,4-diaminotoluene (I) with m-$O_2NC_6H_4SO_2Cl$ (II) was studied with a view to prepare monoacyl derivatives, which could be used as initial products for the synthesis of photostable dyes. It was established that at the condensation of I and II in the presence of substances bonding HCl (C_5H_5N, Na_2CO_3, CH_3COONa), 2,4-(m-O_2N-$C_6H_4SO_2NH)_2C_6H_3CH_3$ (melting point 155 to 156°) was produced nearly exclusively, without any regard to the ratio I : II and the solvent. The conditions of the preparation of 2-

Card 1/4

POLAND / Organic Chemistry. Synthetic Organic Chemistry. G-2

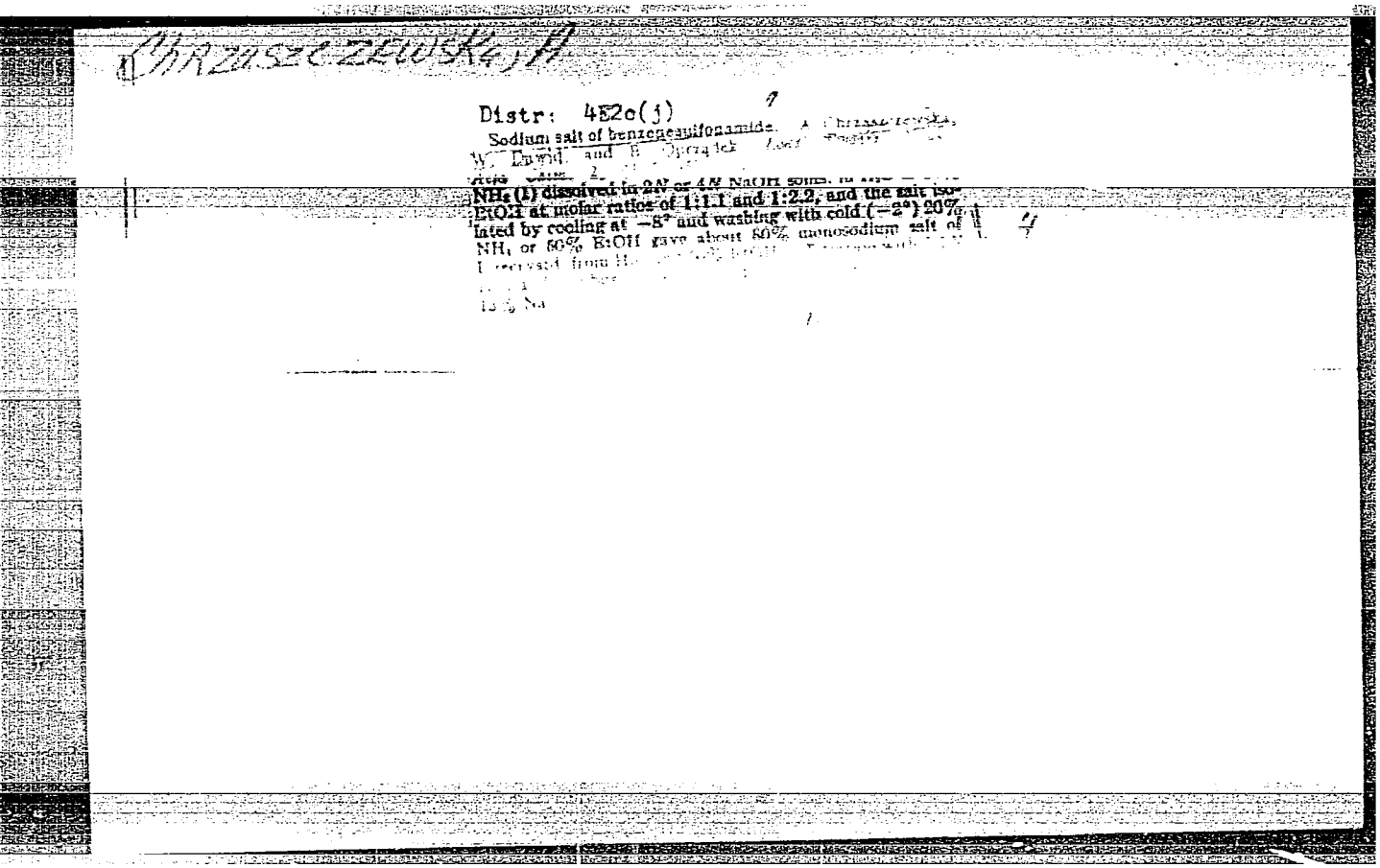
Abs Jour : RZhKhim., No 10, 1958, No 32446

-(3'-$O_2NC_6H_4SO_2NH$)-4-$H_2NC_6H_3CH_3$ (III) and 2-H_2N-4-(3'-O_2N-$C_6H_4SO_2NH)C_6H_3CH_3$ (IV) from I and II were found. In order to confirm the structure of IV, it was reduced to amino (V), which was prepared also by counter synthesis. The dyes prepared by combining IV with various dinitrated amines, or dinitrated V with A_{III}- or gamma-acid, are of low quality. The dinitration of V is carried out at a temperature above 0° in a great excess of acid (in order to avoid the immediate combination with the V remaining in solution). 0.19 mole of II is added to 0.45 mole of I in 200 ml of CH_3OH at a temperature below 40°, the mixture is stirred 3 hours, water is added after cooling until the liquid becomes turbid, filtered (A solution), the precipitate is dissolved in 2-%-ual HCl, precipitated with $NaHCO_3$, and IV is obtained, yield 80%, melting point 166 to 167° (from water). III crystallizes from the A solution several days later, melting point 156

Card 2/4

Abs Jour : RZhKhim., No 10, 1958, No 32446

of II is added little by little at 50 to 60°, the mixture is seasoned 1 hour, and 2-NO_2-4-(3'-$NO_2C_6H_4SO_2NH$)$C_6H_3CH_3$(VI) is produced, yield 81%, melting point 124 to 125° (from alcohol). 0.03 mole of VI in 100 ml it of CH_3OH is reduced (see the reduction of IV), V is produced, yield 72%.



Distr: 452c(j)

Sodium salt of benzenesulfonamide.

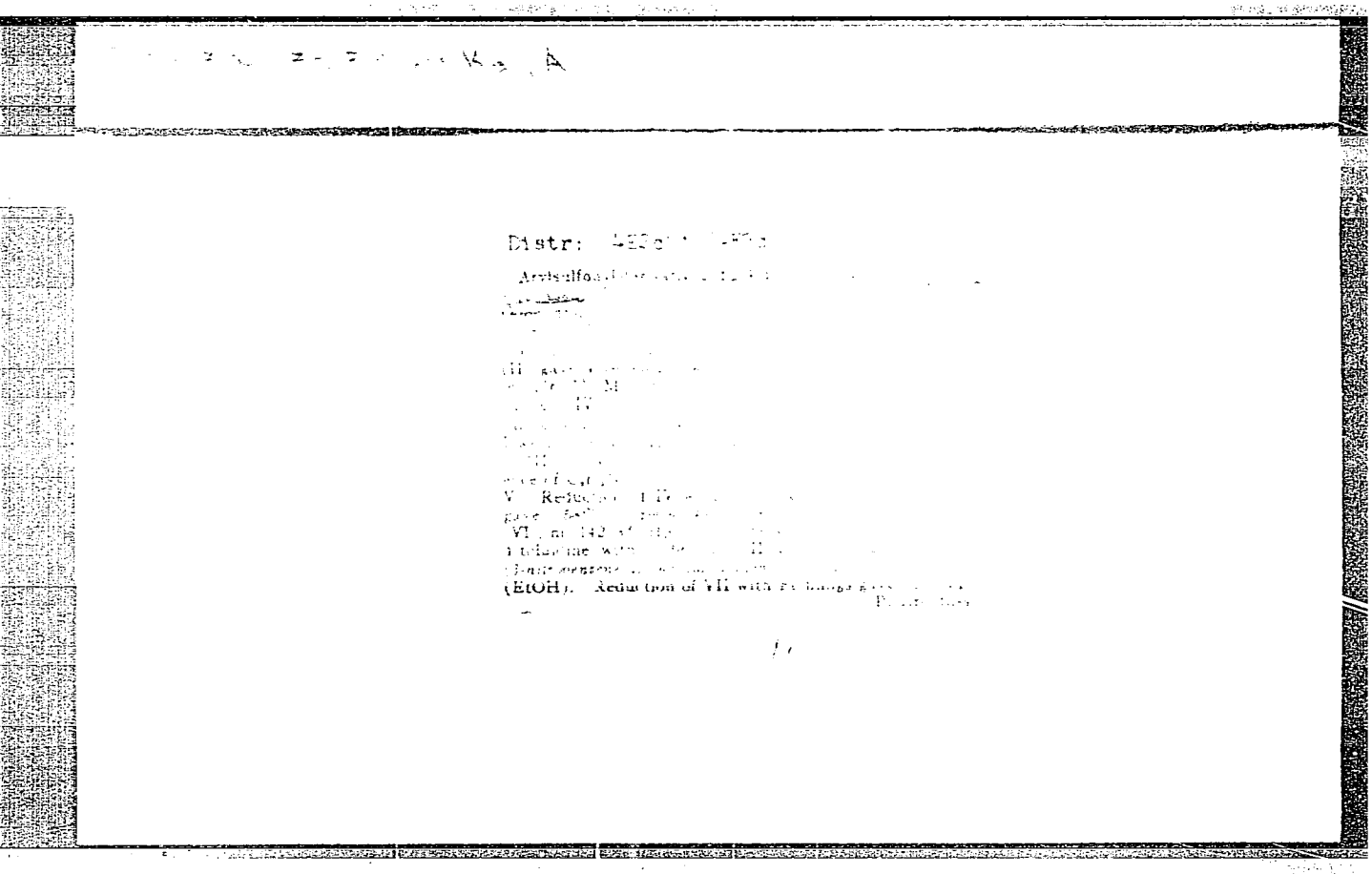
NH$_4$ (I) dissolved in 2N or 4N NaOH soln. in the ... EtOH at molar ratios of 1:1.1 and 1:2.2, and the salt isolated by cooling at −8° and washing with cold (−2°) 20% NH$_4$ or 80% EtOH gave about 80% monosodium salt of I.

Distr: 4E2c(j)/4E3d

✓ Preparation of the *N,N*-dichloroamide of 4-carboxy benzenesulfonic acid. A. Chrzaszczewska and M. Ku[illegible]

[illegible] Zesz. Teoret. Nauk. Akad. Med. Gdańsk 2, 99-101(1973)

English summary [illegible]



Distr:

(EtOH).

Date: 4E2c(1)

1 kg. crushed ice gave 90% H, 6%, 45-

Distr: 4E2c(j)

The anilide of 2-methoxy-5-nitrobenzenesulfon[illegible] acid. R. Bartoszewicz, A. Chrzaszczewska, and Z. Szymkowiak. *Lodz. Towarz. Nauk., Acta Chim.* 2, 95 [illegible] summary).—4-$O_2N$$C_6H_4$OMe 15.3 [illegible] g. 8% H_2SO_4, the [illegible] heated [illegible] min. at 90°, poured in 25 g. [illegible] 10°, and worked up gave 10.5 g. [illegible] (I., m. 139-40° [illegible] EtOH [illegible] Na [illegible] m. 290° [illegible] 2,5-Cl [illegible] NaOMe in 30 ml. MeOH with 5.0 g. [illegible] sodium gave Na salt of I. The Na salt of I [illegible] sponding acid [illegible] (II) [illegible] Na [illegible] 90% EtOH [illegible]

CHRZASZCZEWSKA, A.

Esters of carboxylic acids of 2-hydroxyethylamines and their derivatives. I. Synthesis of *N,N*-bis(2-chloroethyl)-2-aminoethyl *o*-acetylaminobenzoate and triethanolamine tris(*p*-nitrobenzoate). A. Chrzaszczewska, W. Kirkor, and R. Skowroński (Univ. Łódź, Poland). *Zeszyty. Towarz. Nauk. Wydział III Acta Chim.* 3, 41-7(1958)(in English).—$N(CH_2CH_2Cl)_3$ (I) (0.1 mole) and 0.1 mole *o*-$AcHNC_6H_4CO_2K$ (II) was heated 2.5 hrs. at 96–100°, the product extd. twice with a total of 180 cc. boiling C_6H_6, the hot soln. filtered, cooled, and satd. with dry HCl gas. The ppt., which sepd. together with a small amt. of a freezing oil, was filtered off and recrystd. (dissolved in 480 cc. hot $CHCl_3$, cooled, and repptd. with 800 cc. Et_2O) to give 85% *N,N*-bis-(2-chloroethyl)-2-aminoethyl *o*-acetylaminobenzoate, m. 149–50°. The use of the Ag salt of II instead of the K salt in the above reaction proved inconvenient because of the instability of the Ag salt. A mixt. of 0.11 mole freshly prepd. I and 0.11 mole *p*-$O_2NC_6H_4CO_2K$ heated 5.5 hrs. at 91–5°, the product extd. with 80 cc. boiling C_6H_6, and the hot soln. filtered and refrigerated gave 20% triethanolamine tris(*p*-nitrobenzoate), m. 128–9° (50 cc. hot C_6H_6).

Joan P. Urbach

G-2

COUNTRY : Poland
CATEGORY :

ABS. JOUR. : RZKhim., No. 21 1959, No. 74907

AUTHOR : Chrzaszczewska, A., Milewska, B., and Pizon, S.
INST. : Not given
TITLE : α-Naphthylamide of 3-aminobenzenesulfonic Acid

ORIG. PUB. : Soc Sci Lodz Acta Chim, 3 63-66 (1958)

ABSTRACT : Attemps to synthesize intermediates for the synthesis of sulfonamide azo dyes have led to the synthesis of the α-naphthylamide of 3-aminobenzenesulfonic acid (I). 0.05 mol of the α-naphthylamide of 3-nitrobenzenesulfonic acid (II) in 130 ml 30% alcohol is heated to about 100°, 0.2 mol of 60% Na_2S is added in small portions, the solution is heated for 2 hrs at 95°, the alcohol is distilled off, the solution is neutralized with HCl, diluted with 200 ml water,

CARD: 1/2

G-2

COUNTRY : Poland
CATEGORY :

ABS. JOUR. : RZKhim., No. 21 1959, No. 74907

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : heated to boiling, filtered while hot (charcoal), neutralized with Na_2CO_3, to give 71% I, mp 203-204° (from aqueous alc). 0.05 mol II is added (15 min) to 0.15 mol 60% Na_2S at 95°, and the heating is continued for 2 hrs; I is obtained, yield 73%.

V. Skorodumov

CARD: 2/2

COUNTRY : Poland
CATEGORY :

78583

ABS. JOUR. : RZKhim., No. 22 1959, No. *

AUTHOR : Chrzaszczewska, A., Oprzadek, B., and Songin-
INST. : Not given
TITLE : The Reduction of 3-Nitrobenzenesulfonanilide

ORIG. PUB. : Soc Sci Lodz Acta Chim, 3, 73-78 (1958)

ABSTRACT : The authors have studied the reduction of 3-nitrobenzenanilide (I) with Fe or Zn in the presence of HCl (acid or CH_3COOH at various component mole ratios and reaction times. I, mp 120-122° (from alc), is prepared from 3-$NO_2C_6H_4SO_2Cl$ and $C_6H_5NH_2$. A 0.05 mol sample of I in 100 ml 50% CH_3OH was used in all the reductions. 0.31 g-atom of Fe, 44 ml 25% HCl, and solvent were heated 5 min to boiling, the I was added over 45-50 min at constant boiling, the solution

CARD: 1/4 * Pawluk, N.

COUNTRY : Poland G-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1939, No. 78583

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Fe and CH_3COOH. Optimum conditions for the latter case are: 1 hr [addition time?], Fe : 1 mol ratio = 4.7 : 1, CH_3COOH : Fe = (0.22-0.45) : 1: the yield of II is 76-78%. A suspension of I in 50% CH_3OH is treated with HCl (acid) and Zn dust is added to the solution heated to boiling, heating is continued for 15 min, the solution is filtered while hot, about 50 ml CH_3OH are distilled off from the filtrate, and the residue is treated with 20 ml cold water and neutralized with 10%

CARD: 3/4

COUNTRY : Poland G-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No. 78583

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Na_2CO_3. Under optimum conditions (30 min, Zn : I = (3.4-5.3) : 1, HCl excess of 25% or higher), the yield of II is 92-93%. A mixture of I, CH_3COOH, and solvent is treated for 1 hr with boiling with Zn dust, and the procedure is continued as described above. Under optimum conditions (2 hrs, Zn excess 53-77%, acid excess of not less than 50%), the yield of II is 84-86%.

N. Turitsyna

CARD: 4/4

CHRZASZCZEWSKA, A

COUNTRY : Poland
CATEGORY : G-2

ABS. JOUR. : RZKhim., No. 20 1959, No. 71439

AUTHOR : Chrzaszczewska A; Bielawski B; Skowronski R;*
INST. : Not given.
TITLE : Chemistry of N-Halogen Amides. VIII N-Dibromoamide of p-Azobenzenesulfonic Acid and N-Bromo-p-azobenzenesulfonamide Salts of Mono- and Bivalent Metals
ORIG. PUB. : Soc. scient. Lodz. acta chim., 1958, 3, 79-85

ABSTRACT : Salts of N-bromo-p-azobenzene sulfamide (I bromoamide) were obtained from p-azobenzosulfamide (II) or from N-dibromo-II (III). 0.75 moles of azobenzene were added to 6.75 moles $ClSO_3H$ at 25-30° during 30 minutes. After 4 hours at 100°C the mixture was cooled and poured onto ice. In such a manner p-azobenzene sulfochloride was obtained [90% yield, m.p. 124-125° (from CCl_4)], which when warmed for 5 hours at 40-60°C with 25% of aq. solution of NH_3 yielded II, m.p. 224-225°. Into a solution of 0.025 moles

CARD: 1/5

* Slowinski J; Ungier M.

COUNTRY : Poland G-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 20 1959, No. 71439

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : II in 0.05 mole of α solution of N NaOH (25°C) were added 0.055 moles Br_2 over 45 minutes. After keeping the mixture for 3 hours at about 30°C, III was obtained, 83% yield, m.p. 130-131° (from CCl_4). Into 0.0125 mole III in 20 ml H_2O were added over 25 minutes 25 ml of N NaOH. After stirring for 3 hours at 30°C the precipitate was separated and recrystallized from water at 50°C. This procedure yielded 2.4 g of the Na salt of I (IV). IV may be also obtained (12.3 g yield) by the addition of a solution

CARD: 2/5

18

COUNTRY : Poland G-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 20 1959, No. 71439

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : of 0.05 mole NaOH in 25 ml water to a suspension of 0.025 mole III and 0.025 mole II in 50 ml H_2O and by keeping the above mixture for 3 hours at 30°. Similarly, K salt of I was prepared. Into a suspension of 0.025 mole II in 46 ml of a 0.05 molar solution of LiOH were added over 30 minutes (30°), 0.026 moles of Br_2. After 4 hours at 30° and recrystallization of the residue from water at 35°C di-hydro Li-salt of I (V) was isolated (67% yield). V may be also obtained from a mixture of II and III and LiOH (by analogy

CARD: 3/5

COUNTRY : Poland G-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 20 1959, No. 71439

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : of $MgCl_2$ into the solution of IV in water (50°) Mg-salt of I was formed. Report VII, see RZKhim, 1957, #11, 37602.

-- A. Berlin

CARD: 5/5

CHRZASZCZEWSKA, A.

Distr: 4E2c(j)/4E3d

Reduction of *o,o'*-dinitrodiphenyl disulfide to *o*-nitrothiophenol in alkaline medium. A. Chrząszczewska and B. Bielawski (Univ. Łódź, Poland). *Zeszyty Nauk. Uniw. Łódz., Nauk., Wydział III, Acta Chim.* 3, 87-92(1958)(in English).—The optimal conditions were investigated for the reduction of $(o\text{-}O_2NC_6H_4S)_2$ (I) with NaSH, Na_2S, Na_2S_2, and glucose. Na_2S (18.7 g.) in 80 ml. H_2O at 80° was treated with 7.7 g. sublimed S and the whole heated to complete soln. This mixt. was added in increments to 63 g. *o*-$ClC_6H_4NO_2$ in 150 ml. refluxing EtOH. After complete addn., heating was continued 1-2 hrs. The soln. was cooled, filtered, the ppt. mixed with 500 ml. H_2O, filtered, and washed until free of chloride to give a product, m. 193-4°. A table showing the relationship between yield and substrate ratio was included. NaOH (2.4 g.) in 50 ml. abs. MeOH was satd. with H_2S to a phenolphthalein end-point. An aq. NaOH soln. (6 g. NaOH) and the MeOH-NaSH soln. were added in turns during 20 min. to a boiling soln. of 30.8 g. I in 100 ml. EtOH, the dark red mixt. was added to 600 ml. H_2O, the soln. cooled in ice, quickly filtered, and the filtrate poured into 75 ml. concd. HCl and 500 g. well-crushed ice. The ppt. was immediately filtered off and thoroughly dried to give 41-6% *o*-$O_2NC_6H_4SH$ (II), m. 57-8° (1:2 CCl_4-petr. ether). I (30.8 g.) in 100 ml. refluxing EtOH was treated during 20 min. with 12 g. $Na_2S.9H_2O$ in 50 ml. EtOH. The soln. was heated an addnl. 15 min. and then poured into 600 ml. cold H_2O to give 36% II. The technique for reduction with Na_2S_2 was the same as for Na_2S save that a soln. of 8 g. $Na_2S.9H_2O$ and 1.1 g. S in 50 ml. EtOH was the reducing mixt., and the yield was 45-7%. II. Glucose (10.5 g.) was mixed with 15 g. pulverized I and left overnight in 150 ml. EtOH. The mixt. was then heated at 60-70° while being treated with 8 g. NaOH in 20 ml. H_2O. The mixt. was poured into 250 ml. cold H_2O, filtered, and the filtrate added dropwise to 40 ml. concd. H_2SO_4 in 300 g. crushed ice to yield 58% II. I (15. g.), 8.8 g. pulverized NaOH, and 100 ml. EtOH was refluxed and 12.6 g. $Na_2S_2O_4.2H_2O$ in 70 ml. H_2O was added in portions during 15 min. After the addn., heating was continued 15 min. The warm soln. was poured into 500 ml. H_2O, cooled with ice, filtered, and the 0° filtrate acidified with dil. HCl to yield 66-8% II. Rolland M. Waters

4
2 May
2

CHRZASZCZWESKA, A.; BRAUN, A.; NOWACZYK, M.

N,N'-di-p-tolyidiacridine nitrate. p. 93.

ACTA CHIMICA. (Lodskie Towarsystwo Naukowe. Wydzial III: Nauk Matematycsno-Prsyrodniczych) Lodz, Poland. Vol. 3, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

P/012/59/004/03/08/020

AUTHORS: Chrząszczewska, A.; Kirkor, W.; Dawid, W.

TITLE: Esters of Carboxylic Acids of 2-Hydroxyethylamines and its Derivatives. II. Synthesis of N-Bis-(2'-Hydroxyethyl)-2-Aminoethyl p-Nitrobenzoate and its Hydrochloride and of Hydrochloride of N-Bis-(2'-Chloroethyl)-2-Aminoethyl p-Nitrobenzoate

PERIODICAL: Societas Scientiatum Lodziensis Acta Chimica, 1959, Vol 4, pp 77 - 84

TEXT: The authors describe a further step in their investigations on esters of carboxylic acids of 2-hydroxyethylamines and its derivatives. They succeeded in synthesizing a) N-bis-(2'-hydroxyethyl)-2-aminoethyl p-nitrobenzoate and its hydrochloride, and b) hydrochloride of N-bis-(2'-chloroethyl)-2-aminoethyl p-nitrobenzoate. These syntheses were not described yet in chemical scientific literature. The results of quantitative analysis of all compounds obtained are in agreement with theoretical assumptions. There are 2 tables and 2 references: 1 Polish and 1 English.

Card 1/2

P/012/59/004/03/08/020

Esters of Carboxylic Acids of 2-Hydroxyethylamines and its Derivatives. II. Synthesis of N-Bis-(2'-Hydroxyethyl)-2-Aminoethyl p-Nitrobenzoate and its Hydrochloride of N-Bis-(2'-Chloroethyl)-2-Aminoethyl p-Nitrobenzoate

ASSOCIATIONS: Katedra Chemii Organicznej Uniwersytetu Łódzkiego (Lodz University, Department of Organic Chemistry); Katedra Chemii Wyższej Szkoły Ekonomicznej (High School of Economics, Department of Chemistry) in Lodz

PRESENTED: March 14, 1959

Card 2/2

P/012/59/004/03/09/020

AUTHORS: Chrząszczewska, A.; Szalecki, W.; Kirkor, W.; Dawid, W.

TITLE: Esters of Carboxylic Acids of 2-Hydroxyethyl-Amines and its Derivatives. III. Synthesis of Hydrochloride of Triethanolamine Tri-o-Chlorobenzoate

PERIODICAL: Societas Scientiarum Lodziensis Acta Chimica, 1959, Vol 4, pp 85 - 87

TEXT: While investigating the action of acid chlorides on triethanolamine, a new compound, the hydrochloride of triethanolamine of tri-o-chlorobenzoate was obtained. It was not described yet in chemical scientifical literature. It cristallizes in the form of colourless plates with 97-98°C melting temperature. It dissolves easily in acetone, methanol and ethanol, sparingly in benzene and in water and is not soluble in ether. Quantitative analysis and molecular weight are in agreement with theoretical figures.

ASSOCIATION: Katedra Chemii Organicznej Uniwersytetu Łódzkiego (Lodz University, Department of Organic Chemistry).

PRESENTED: March 14, 1959

Card 1/1

P/012/59/004/03/10/020

AUTHORS: Russocki, M.; Chrząszczewska, A.; Slawiński, T.; Hahn, W.E.

TITLE: Synthesis of 1, 6, 8, 2', 4', 6'-Hexahydroxyphenylfluorone

PERIODICAL: Societas Scientiarum Lodziensis Acta Chimica, 1959, Vol 4, pp 90 - 93

TEXT: The scope of the investigation described in this article was the synthesis of a hitherto not known symmetrical hexahydroxyphenylfluorone in which all orto positions, as regards the central carbon, are filled with hydroxy groups. This goal was achieved by condensation of phloroglucine aldehyde with phloroglucine in a classical way. The condensation was carried out by heating these compounds in 50%-alcohol, acidulated with H_2SO_4 in the atmosphere of air or carbon dioxide. The output was between 48-66%. The same product, but with lower output and purity, was obtained by condensation in concentrated sulphuric acid. There are 4 references: 2 German and 2 English.

ASSOCIATION: Katedra Chemii Organicznej Uniwersytetu Łódzkiego (Lodz University, Department of Organic Chemistry)

PRESENTED: March 14, 1959

Card 1/1

P/012/59/004/03/11/020

AUTHORS: Bartoszewicz, R.; Chrząszczewska, A.; Drabikowska, A.; Drabikowski, W.

TITLE: N-Beta, Gamma-Dihydroxypropylarylsulphonarylides. IV

PERIODICAL: Societas Scientiarum Lodziensis Acta Chimica, 1959, Vol 4, pp 95 - 99

TEXT: In continuation of studies on N-beta, gamma-dihydroxypropyl-arylides of aromatic sulphonic acids (Refs. 1, 2, 3) two new compounds of this type were obtained. They are: N-beta, gamma-dihydroxypropyl-3-nitroanilide melting at 147-148°C, and N-beta, gamma-dihydroxypropyl-4-nitroanilide of 3-nitrobenzenesulphonic acid, melting at 127-125.5°C. The authors describe their experiments leading eventually to the compounds mentioned above. They have found that the presence of Nitro group, bound to the sulphonic acid and amine core, makes the introduction of the dihydroxypropyl group rather difficult. Further, it was established that, when obtaining a compound in which the nitrate group in the amine ring is in position 4, and with the application of chlorhydrine in quantities exceeding 50%, the product became greatly contaminated, most likely because of some

Card 1/2

P/012/59/004/03/11/020

N-Beta- Gamma-Dihydroxypropylarylsulphonarylides. IV

secondary reactions. There are 8 references: 4 Polish and 4 English.

ASSOCIATION: Zakład Chemii Organicznej Uniwersytetu Łódzkiego (Lodz University, Department of Organic Chemistry)

PRESENTED: March 14, 1959

Card 2/2

23277
P/012/60/006/000/001/001
A221/A126

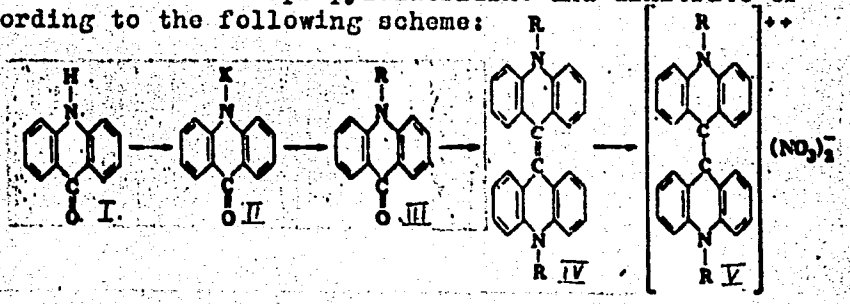
5.5220

AUTHOR: Chrząszczewska, A.; Kirkor, W.; Bajan, J., and Nowaczyk, M.

TITLE: Dinitrates of N,N'-dipropyldiacridine and N,N'-diallyldiacridine and intermediate products

PERIODICAL: Societatis Scientiarum Lodziensis Acta Chimica, v. 6, 1960, 49 - 54

TEXT: Looking for new compounds of lucigenine type with chemiluminescent properties, which could be used as indicators in volumetric analyses, the authors synthesized dinitrate of dipropyldiacridine and dinitrate of diallyldiacridine according to the following scheme:



Card 1/6

Dinitrates of N,N'-dipropyldiacridine and...

R = CH_3-CH_2-CH_2-, or CH_2-CH-CH_2-

The synthesis of acridone (I) and its potassium salt (II) were prepared exactly as described by A. Chrząszczewska (Ref. 1: A. Chrząszczewska, A. Braun, M. Nowaczyk - Soc. Sci. Lodz Acta Chim. 3, 93, 1958). This potassium salt was treated with propyl iodate and as a result the N-propylacridone (III) was obtained in the form of yellow crystals, melting at 129 - 130°C. The compound III was then reduced by means of zinc dust in alcoholic solution of HCl and the N,N'dipropyldiacridine (IV) was obtained and recrystallized from the cyclohexanone; it did not melt when heated to 300°C. This compound, in turn, was brought to boil with 2n HNO_3 - and the dinitrate of N,N'-dipropyldiacridine was obtained crystallizing in the form of yellow scale. It is easily soluble in water, and when treated with hydrogen peroxide it showed blueish-green chemiluminescence. In the course of the second product synthesis, the acridone potassium salt was treated with allybromide and N-allylacridone was obtained. This compound is easily soluble in alcohol, benzene and acetone and shows strong blue fluorescence; recrystallized from diluted alcohol it melts at 136 - 137°C. This product, reduced in the same way as described above, yields the N,N'-diallyldiacridine, melting at 253 -

Card 2/6

254°C(with decomposition). Brought to boil with 3n HNO_3, the dinitrate of N,N'-dipropyldiacridine in the form of yellow needles was obtained. This compound is easily soluble in water and, treated with alcaline hydrogen peroxide, shows blueish-green chemiluminescence. Neither of these compounds (I, II, III, IV, and V) were described yet in chemical literature. Larger quantities of these lucigenine compounds necessary for further investigations were obtained by A. Braun and A. Witkowski. Identity of products and their purity was confirmed through elemental analysis and physico-chemical investigations made by J. Kroh (Ref. 7: Soc. Sci. Lodz, Acta Chim. 5, 1960). Experimental part: N-propylacridone - In a three-necked 200 ml flask, fitted with reflux-cooler, thermometer and mechanical stirrer, 20 g of acridone potassium salt and 40 g (0.23M) of n-propyl iodate were placed. The reaction was carried out for five hours at 125°C under vigorous stirring. After completion KJ sediment was filtered out and from the filtrate the N-propylacridine was precipitated by means of water. After recrystallization from water-alcohol 2:1 solution, the product was obtained in the form of long needles, melting at 129 - 130°C. Results of two elemental analyses for C, H and N were in fairly close agreement with theoretical figures, calculated

Dinitrates of N,N'-dipropyldiacridine and...

for the compound $C_{16}H_{15}NO$. N,N'-dipropyldiacridine - In a 200 ml round flask 4.3 g (0.017 M) N-propylacridone, 17.2 g zinc dust and 129 ml 2n HCl dissolved in alcohol were placed and the flask was heated for one hour on a water bath. Green sediment which had formed was filtered out and recrystallized from cyclohexanone. The yield was 1.4 g of product, which did not melt when heated to 300°C. Results of two elemental analyses of this product for C, H and N, were in fairly close agreement with theoretical figures calculated for the compound $C_{32}H_{30}N_2$. Dinitrate of N,N'-dipropyldiacridine - In a 50 ml beaker the mixture of 1 g of N,N'-dipropyldiacridine was brought to boil with 20 ml of 2n HNO_3 and was filtered. From the filtrate 0.34 g of the dinitrate of N,N'-dipropyldiacridine was obtained in the form of yellow scales. This compound is soluble in water and, treated with caustic soda and hydrogenperoxide, shows blueish-green chemiluminescence. Results of two elemental analyses of this product for C, H and N were in fairly close agreement with theoretical figures, calculated for the compound $C_{32}H_{30}N_4O_6$. N-allylacridone - In a three-necked, 200 ml flask, fitted with reflux cooler, thermometer and stirrer, a mixture of 25 g (0.1 m) of acridone potassium salt and 80 g (0.66 m) of allyl bromide were warmed up on a water

Card 4/6

bath. The reaction took two hours at 90°C under vigorous stirring. During this process KBr settled on the flask wall and was subsequently filtered out. From the filtrate the N-allylacridone was precipitated by means of water and was recrystallized from water-alcohol 2:1 solution. The product was yellow and melted at 136 - 137°C. The result of two elemental analyses of this product for C, H and N were in fair agreement with theoretical figures calculated for the compound $C_{16}H_{13}ON$. The double link was confirmed by a conventional method. N,N'-diallyldiacridine - In a 200 ml flask fitted with reflux cooler the mixture of 4.7 g of N-allylacridone, 18.8 g of zinc dust and 141 ml of HCl dissolved in alcohol was heated on a water bath for 1 hour at 60°C. The pale-green sediment which resulted was filtered out and was treated in a beaker with 50 ml of hot cyclohexanone. The N,N'-diallylacridine was dissolved and filtered from zinc dust. From the filtrate it crystallized into fine crystals melting at 251 - 252°C (with decomposition). Results of two elemental analyses of this product for C, H and N, were in a fair agreement with theoretical figures calculated for the compound $C_{32}H_{26}N_2$. Dinitrate of N,N'-diallyldiacridine - In a 50 ml beaker the mixture of 1.5 g of N,N'-diallyldiacridine and 30 ml of 3n HNO_3 was brought to boil. From the cold solution the dinitrate of N,N'-diallyldiacridine crystallized into

small yellow needles. The yield was 0.7 g. Again the results of two elemental analyses of this product for C, H, N and O were in a fair agreement with theoretical figures, calculated for the compound $C_{32}H_{26}N_4O_6$. There are 7 Soviet-bloc references.

ASSOCIATION: Zakład Chemii Organicznej Uniwersytetu Łódzkiego (Łódź University, Organic Chemistry Department) in Łódź

PRESENTED: December 12, 1959

S/081/62/000/022/028/088
B144/B101

AUTHORS: Chrząszczewska, Anna, Machlański, Tadeusz, Władyga, Ryszard

TITLE: Study of diacylglycerol phosphoric acids and characteristic salts of their derivatives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 228, abstract 22Zh245 (Zesz. nauk Univ. Łódzk., ser. 2, no. 10, 1961, 191-194 [Pol.; summary in Eng.])

TEXT: In searching for substances suitable for identifying diacylglycerol phosphoric acids (I glycerol phosphoric acid) their monoguanidine salts were obtained. A hot solution of 8.5 mmoles 1,2-distearyl-I (Ia) in 100 ml acetone was added to 8.5 mmoles guanidine carbonate (II base) in 50 ml alcohol; after heating for 6 hrs at ~100°C and hot filtering it is cooled and Ia·II is filtered; yield 53%, melting point 33-34°C [from acetone-alcohol (1 : 1)]. At 85°C a mixture of 78 mmoles water with 20 ml ether is gradually added to a mixture of 35 mmoles $C_{15}H_{31}COOCH_2CH(OCOC_{15}H_{31})CH_2OH$ and 35 mmoles P_2O_5. The melt is dissolved

Card 1/2

in 180 ml C_6H_6, 5 drops of water and 3 ml of absolute alcohol are added, the decantate is added gradually to a solution of 35 mmoles of II-carbonate in 10 ml of 50% alcohol, cooled to 5°C, 100 ml of acetone are added, and the salt of 1,2-dipalmityl-I and II is filtered off; yield 42%, melting point 72-73°C (from CH_3OH). In a similar way the salt of 1,3-dipalmityl-I and II was obtained; yield 47.3%, melting point 76-77°C. [Abstracter's note: Complete translation.]

CHRZASZCZEWSKA, Anna; MACHLANSKI, Tadeusz; WLADYGA, Ryszard

Diacylglycerinphosphoric acids and their derivatives in the form of salts. Nauki matem przyrod Lodz no.10:191-194 '61.

1. Department of Organic Chemistry, University, Lodz.

CHRZASZCZEWSKA, A.; KIRKOR, W.; MACIEJEK, M.

A method of obtaining N-bis-(2'hydroxyethyl)-2-aminoethyl - p - nitrobenzoate and the synthesis of some of its derivatives. Acta chim 8:21-27 '62.

1. Department of Organic Chemistry, University, Lodz. Presented by A. Chrzaszczewska.

CHRZASZCZEWSKA, A.; HAHN, W.E.; KACZAN, J.

Research on the diacylglycerophosphoric acids. Pt.3. Acta chim 8:29-35 '62.

1. Department of Organic Chemistry, University, Lodz. Presented by A. Chrzaszczewska.

CHRZASZEWSKA, A.; BRAUN, A.

New analogs of lucigenin. Pt. 2. Acta chim 9:189-198 '64.

1. Department of General Chemistry of the Lodz University.
Presented Nov.1962.

CHRZASZCZEWSKA, A.; DAWID, W.

Esters of carboxylic acids of 2-hydroxyethylamines and their derivatives. Pt.10. Acta chim 9:199-212 '64.

1. Department of Organic Chemistry of the Lodz University.
Presented Nov. 1962.

CHRZASZCZEWSKA, A.; KACZAN, J.

From research on diacylglycerophosphoric acids. Pt.4. Acta chim 9:213-225 '64.

Research on glycylglycolphosphoric acid. Pt.1. Ibid.:227-236

1. Department of Organic Chemistry of the Lodz University. Presented Nov.1962.

OLCZAKOWSKI, Wladyslaw, prof. mgr inz.; CHRZASZCZ, Jerzy; MOTYKA, Ignacy, mgr inz.; SMYK, Marian; STRANC, Zofia, mgr

Desalting brown coal by the ion exchange method. Glow inst gorn prace no.339:1-28 '64.

1. Central Mining Institute, Katowice.

CHRZASZCZEWSKI J.

POLAND/Chemical Technology. Chemical Products and Their Applications. Industrial Organic Synthesis. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20397

Author : Chrzaszczewski, J., Kasinski, M., Wronski, M.
Inst : -
Title : A New Method for Obtaining Sulfophthalein Indicators.

Orig Pub : Przem. chem., 1956, 12, No 11, 647

Abstract : The existing methods for the obtaining of sulfophthalein indicators (SI) are based proncipally on the condensation of the anhydrite of O-sulfobenzoic acid (I) with the corresponding phenol (P), are noted for duration, and give a yield of 20-30 percent,

Card : 1/3

POLAND/Chemical Technology. Chemical Products and Their Applications. Industrial Organic Synthesis. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20397

on the basis of the NH_4 salt of I. A method of direct condensation of the NH_4 salt of I with the corresponding P in the presence of P_2O_5 is proposed. Dry pulverized NH_4 salt of I is mixed with P_2O_5 in a gram-molecular ratio of 1:1 and the mixture is heated; then, for 1 hour, while being continuously blended, P and P_2O_5 are added in a gram-molecular ratio of I:1.5. Duration of condensation at 130-140° was less than four hours. Unreacted P was distilled with an aquepus vapor. By this method, thymolsulfonephthalein was obtained with an yield

Card : 2/3

H-64

CHRZASZCZEWSKI ~~Khshonshchevsky~~

E-1

POLAND/General Problems

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, No 7526

Author : Khshonshchewsky, Smal', WALENDZIAK Valendzyak

Inst : Not Given

Title : Synthesis of Ethylenediamine-tetraacetic Acid (I) and Determination of Water Hardness by Means of Complexone III.

Orig Pub : Zesz. nauk. uniw. tod-k., 1956, ser. 2, No 2, 77-86

Abstract : A modification of the method for the synthesis of EDTA (I) by Schwarzenbach giving a good yield has been worked out as well as a method for the determination of water hardness by means of complexone III (II). (Schwarzenbach G., Helv. chim. acta., 1951, 34, 1503). 106 g. of monochloracetic acid is dissolved in 200 ml. of water, neutralized with NaOH (III) in the presence of phenolphthalein (IV) and is diluted with water to 375 ml. The resulting solution is heated to 90°C. and to this is added, (after being neutralized in the presence of (IV)) 31 g. of the hydrochloride of $C_2H_4(NH_2)_2$ in 142 ml. of water and then is added dropwise with vigorous agi-

Card : 1/3

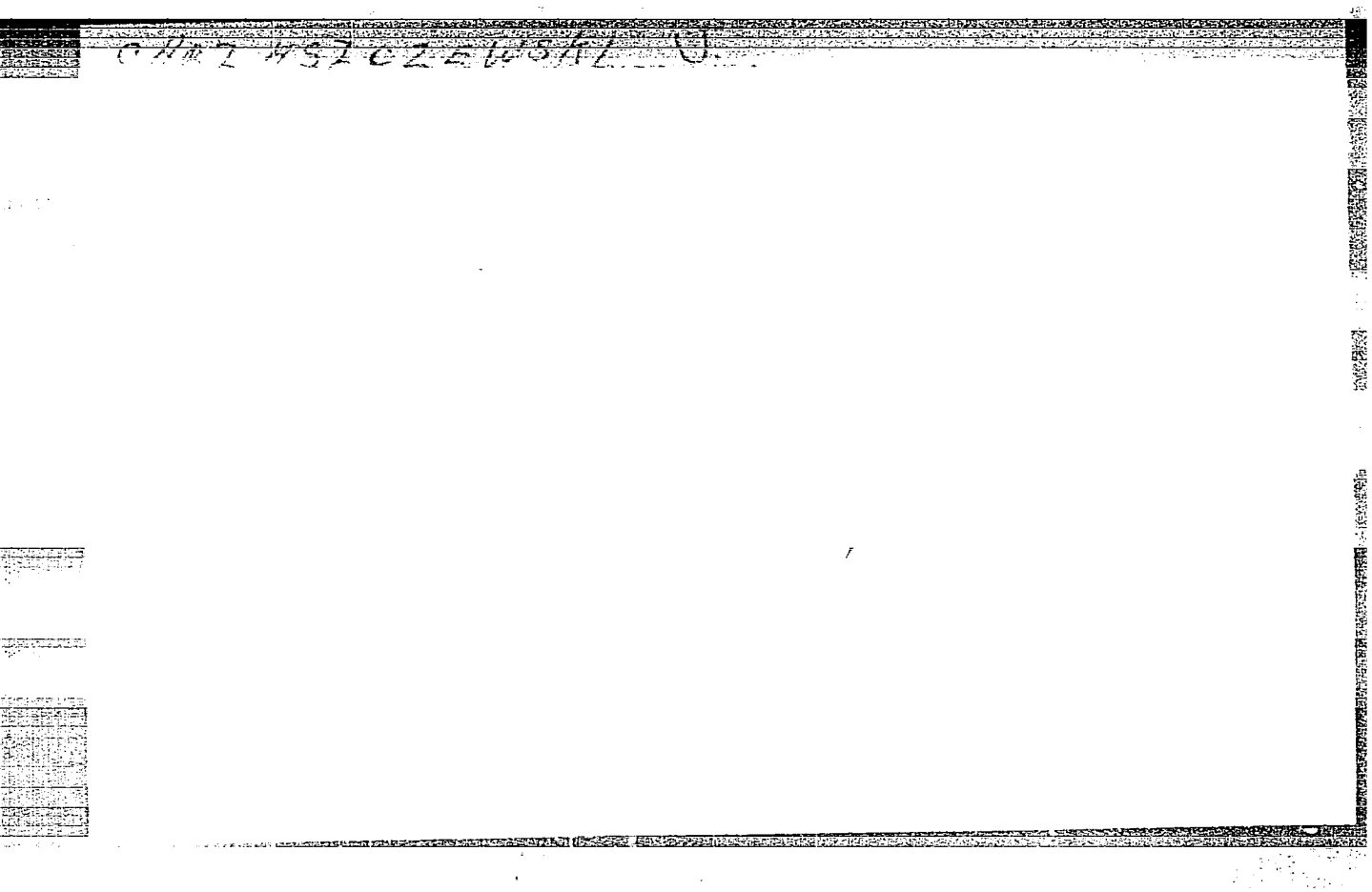
-3-

...ion (VII) in 1 liter/ 5 drops of eriochrome black (0.5 g. in 100 ml of 96% alcohol) and titrated from a microburette with a 0.01N solution of II (containing 0.1 g of $MgCl_2$ $6H_2O$ in 1 liter). The titer of the solution II is determined by the aid of a solution obtained by dissolving 0.1183 g. of $CaCO_3$ g. in V and diluting the water up to 2 liters (1 ml. contains 0.033 mg. of CaO). For

Card : 2/3

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, No 7526

the Mg determination an oxalate buffer solution is used (35 g. of VI and 1.3 g. of $(NH_4)_2C_2O_4 \cdot H_2O$ and 3.5 ml. of VII in 250 ml.).



POLAND / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis, Phase Transitions. B

Abs Jour: Ref Zhur-Khimiya, No 17, 1958, 56736.

Author : Chrzaszczewski Jozef, Wronski Mieczyslaw, Leszczynska Alicja.
Inst : Not given.
Title : The Solubility of Carbon Bisulfide in Electrolyte Aqueous Solutions.

Orig Pub: Zesz. nauk. uniw. lodzk., 1957, Ser.2, No 3, 133 - 137.

Abstract: The solubility of CS_2 in aqueous solutions of NaCl and Na_2SO_4 at 15 and 25°C have been investigated, and the CS_2 hydrolysis rate constants in NaOH solutions have been determined.

Card 1/2

POLAND / Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis, Phase Transitions. B

Abs Jour: Ref Zhur-Khimiya, No 17, 1958, 56736.

Abstract: Data on the solubility of CS_2 (S) versus temperature (θ) and ionic power of electrolyte solutions (μ), expressed by the equation $\lg 1/S = 1.619 + 5.87 \cdot 10^{-7}\,\theta^2 + 0.163\,\mu$, may prove useful in the development of the fiber viscosity technology.

Card 2/2

CHRZASCZEWSKI, JOSEF.

POLAND/Physical Chemistry - Surface Phenomena, Adsorption, Chromatography, Ion Exchange. B.

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 46139

Author : Josef Chrzasczewski, Mieczyslaw Wronski, Jerzy Michalski

Inst : Lodz University.

Title : Carbon Bisulfide Adsorption on Activated Carbon of "Norit" Type in Presence of Water Vapor and Air.

Orig Pub : Zesz. nauk. Univ. lodzk., 1957, Ser. 2, No 3; 139-143

Abstract : The adsorption (A) of CS_2 on activated carbon (AC) of the "Norti" type in presence of water vapor and air was investigated by the volumetric method (RZhKhim, 1957, 57221; 1958, 32280), and it was found that the moisture content in AC decreased its adsorption properties. This effect is expressed especially clearly in the

Card 1/2

POLAND/Physical Chemistry - Surface Phenomena, Adsorption, Chromatography, Ion Exchange. B.

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 46139

adsorption of the air itself and considerably less in the A of CS_2. The presence of air does not influence the A degree of CS_2, because the apparent change in the adsorption properties of carbon are caused by the desorption of air.

Card 2/2

CHRZASZCZEWSKI J.

POLAND / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60558.

Author : ~~Jozef Chrzaszczewski~~, Marian Kosinski.
Inst : Lodz University.
Title : Sulfophthalein Indicators. Method of Preparation.

Orig Pub: Zesz. nauk. Univ. lodzk., 1957, Ser. 2, No 3, 145-157.

Abstract: o-Cresolsulfophthalein (I) and thymolsulfophthalein (II) are prepared by the condensation of the ammonium salf of sulfobenzoic acid $SO_3NH_4C_6H_4COOH$ (1 mole) with corresponding phenols (2 moles) at 140 to 160° in the duration of 1 hour. The condensation product is distilled with steam or dissolved in a solution of $NaHCO_3$, precipitated with HCl and recrystallized from glacial CH_3COOH or absolute alcohol. The yield is 75 to 80% of

Card 1/2

POLAND / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60558.

Abstract: the theoretical. Cresol o-Purple and Bromothymol Blue are prepared by bromination of I and II.

Card 2/2

POLAND / Laboratory Equipment, Apparatus; Their Theory, Construction and Application. F

Abs Jour : Ref Zhur - Khim., No 10, 1958, No 32280

Author : Jozef Chrzaszczewski, Mieczyslaw Wronski.

Inst :

Title : Simple Determination Method of Isotherm of Vapor Adsorption on Solid Substances.

Orig Pub : Roczn. chem., 1957, 31, No 1, 297-299

Abstract : A simple apparatus for measuring isotherms of vapor adsorption is described. The apparatus consists of a gas burette connected with a Hg manometer, vacuum installation and two vessels with faucets for the adsorbent and adsorbed substance. Computation equations are presented.

Card 1/1

CHRZCZONOWICZ, Grzegorz, inz.

Electromagnetic interlocking of circuit-breaker switches in systems with sectionalized rails. Wiad elektrotech 30 no.10: 349-351 O '62.

CHRZCZONOWICZ, S.

3 Math

Polish Technical Abst.
No. 4, 1953
Chemistry and Chemical
Technology

2465 677.473.772.2.093(072)

Chrzczonowicz S., Dyniewski S. Catalytic Polymerisation of Caprolactam.

„Katalityczna polimeryzacja kaprolaktamu". (Prace Gł. Inst. Włók. No. 5), Warszawa, 1952, PWT, 9 pp., 2 figs., 4 tabs.

The problem of simplifying the method of obtaining steelon and of reducing production costs by substituting catalytic polymerisation for condensation methods. Experiments have revealed that sodium hydroxide influences the polymerization of caprolactam, yielding a product with properties similar to those of steelon obtained by condensation method. The brief time of reaction suggests that the catalytic method may be of considerable value from an economic point of view. Tables of experimental results and graphs showing the relation of the degree of polymerisation to the quantity of catalyser are given together with a diagram of the apparatus used.

CHRZCZONOWICZ, S

Catalytic polymerization of ε-caprolactam in presence of anhydrous sodium acetate catalyst. Stanisław Chrzczonowicz and Jerzy Moniewski (Tech. Univ., Łódź, Poland). Zeszyty Nauk. Politech. Łódz. No. 2, Chem. No. 1, 77-80 (1954)(English summary).—The authors studied polymerized ε-caprolactam (I) in the absence of O. I 50 g. was introduced into a flask and heated to 268° (b.p.) in the atm. of cleaned CO_2. After more than 10 min. of boiling a lump of anhyd. AcONa 0.08–0.05 g. was introduced through a long neck of the flask. After 12–30 min. the liquid began to grow thick. Within 3–7 min. after that point the temp. increased considerably; the external heating was now increased in order to keep the liquid at its b.p. The liquid became less and less thick and its color darkened, which is explained by a partial depolymerization. Depolymerization began after 20–32% of I became polymerized. Depolymerization can be explained by thermal cracking, catalytic decompn., reaction between long and short mols., and (or) oxidation (from leaks of O). Conclusion: Polymerization of I with AcONa is less suitable for a full-scale production than with NaOH. Polymerization with AcONa 23–33% of the monomer did not react at all. 34 references.

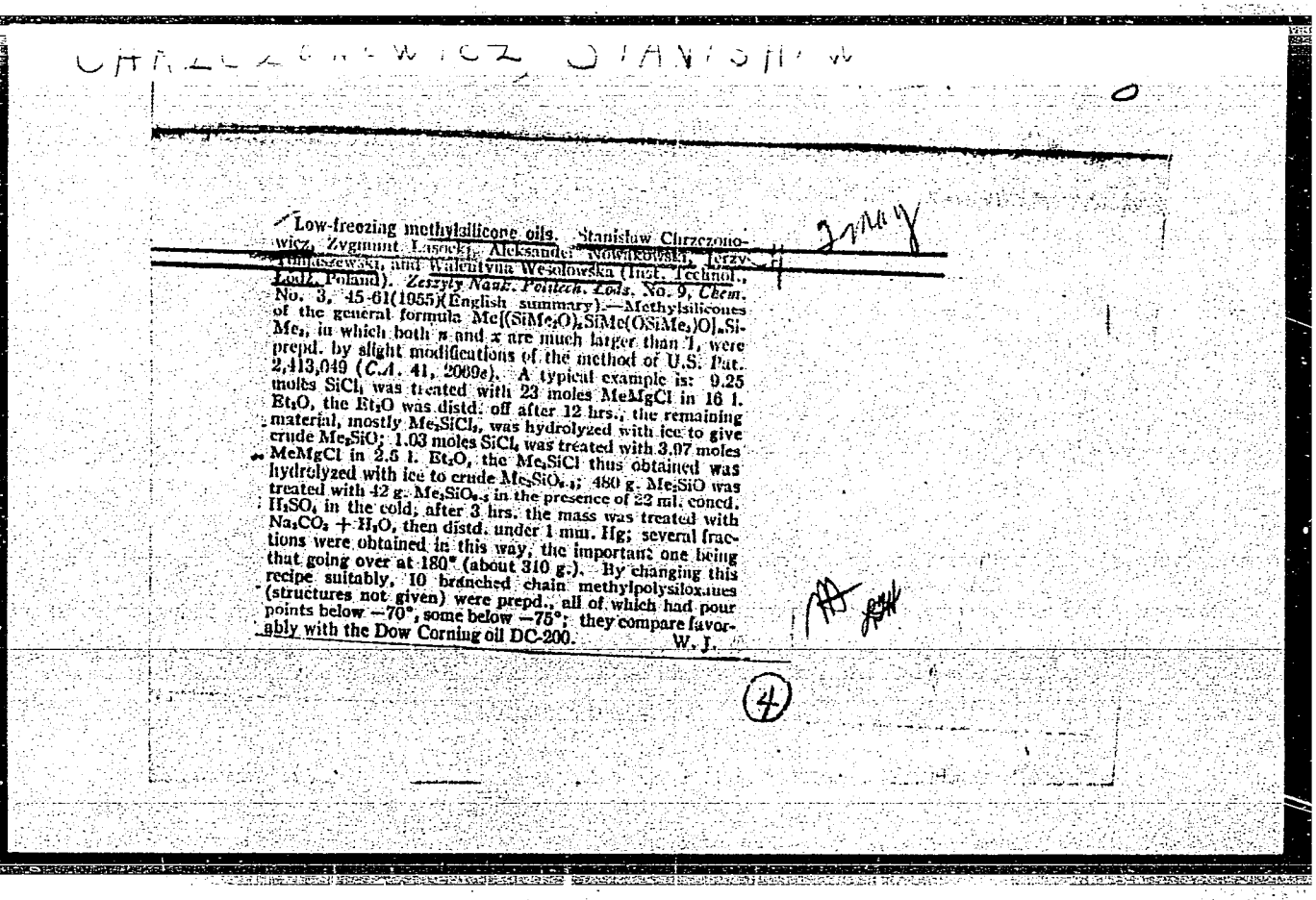
F. I. Hendel

(1)

CHRZCZONOWICZ, S.

Synthesis of certain derivatives of 3,5-pyrazolidinedione. Stanisław Chrzczonowicz, Andrzej Zwierzak, and Osman H. [illegible] (Tech. Univ., Łódź, Poland). *Zeszyty Nauk. Politech. Łódz.*, No. 2, *Chem.* No. 1, 97-102 (1954) (English summary).—A new compd., probably 1,2-diphenyl-4,4-dibutyl-3,5-pyrazolidinedione (I) has been obtained. The starting material, 1,2-diphenyl-3,5-pyrazolidinedione (II) was obtained as prescribed by Ruhkopf (*C.A.* 35, 2509[7]). However, it was found that a temp. of 170–180°, instead of 180–200°, avoids charring. The highest yields of II, i.e., 70%, were obtained when hydrazobenzene was especially purified and when EtOH, formed during condensation, was removed by distn. II (25 g.) and NaOH 4 g. were dissolved in the least amt. of EtOH, EtOH was removed by distn., 15 g. BuBr was added, the mixt. heated a few hrs. under reflux at 120°, and unreacted Na salt removed by leaching with water. The oily residue was then dissolved in the min. amt. of EtOH, crystd., the obtained crystals were dissolved in the min. amt. of benzene and ligroine added to give colorless needles, m. 121–2°.

F. J. Hendel



Low-freezing methylsilicone oils. Stanisław Chrzczonowicz, Zygmunt Lasocki, Aleksander Nowakowski, Jerzy Chmielewski, and Walentyna Wesołowska (Inst. Technol., Łódź, Poland). *Zeszyty Nauk. Politech. Łódz. No. 9, Chem.* No. 3, 45-61(1955)(English summary).—Methylsilicones of the general formula $Me[(SiMe_2O)_xSiMe(OSiMe_3)O]_nSiMe_3$, in which both n and x are much larger than 1, were prepd. by slight modifications of the method of U.S. Pat. 2,413,049 (*C.A.* 41, 2089e). A typical example is: 9.25 moles $SiCl_4$ was treated with 23 moles MeMgCl in 16 l. Et_2O, the Et_2O was distd. off after 12 hrs., the remaining material, mostly Me_2SiCl_2, was hydrolyzed with ice to give crude Me_2SiO; 1.03 moles $SiCl_4$ was treated with 3.07 moles MeMgCl in 2.5 l. Et_2O, the Me_3SiCl thus obtained was hydrolyzed with ice to crude $Me_3SiO_{0.5}$; 480 g. Me_2SiO was treated with 42 g. $Me_3SiO_{0.5}$ in the presence of 22 ml. concd. H_2SO_4 in the cold; after 3 hrs. the mass was treated with $Na_2CO_3 + H_2O$, then distd. under 1 mm. Hg; several fractions were obtained in this way, the important one being that going over at 180° (about 310 g.). By changing this recipe suitably, 10 branched chain methylpolysiloxanes (structures not given) were prepd., all of which had pour points below −70°, some below −75°; they compare favorably with the Dow Corning oil DC-200. W. J.

(4)

Chrzanowicz, Stanislaw

Preparation of an *N*-hydroxymethyl derivative of Steelon, soluble in methyl and ethyl alcohol. Stanisław Chrzanowicz, Ludwik Breiter, and Aleksander Nowakowski (Inst. Technol., Łódź, Poland). *Zeszyty Nauk. Politech. Łódz. Chem.* No. 3, 63-72(1955)(English summary).—No. 9, The Steelon (I) used had a degree of polymerization of 180-200, melted from 210 to 30°, and contained 3-4% ε-caprolactam. I (10 g.) in 40 g. HCO_2H was treated with 50-100 g. HCHO for 8-45 min. (addn. time of the HCHO) at 60-100°, followed by 10-45-min. heating time. In this way no product could be obtained which was soluble in MeOH. If the HCHO was replaced by 5-10 g. paraformaldehyde, the *N*-hydroxymethyl deriv. of I was obtained, which was sol. in MeOH, also EtOH, to about 10%, and melted without decompn. at 150-70°.

Werner Jacobson

(2)

CHRZCZONOWICZ, S.

Method of imparting to Steelon fibers a delustered appearance and a coarse surface. Aleksander Nowakowski, Stanisław Chrzczonowicz, and Ludwig Brajter (Inst. Technol., Łódź, Poland). *Zeszyty Nauk. Politech. Łódz.* No. 9, *Chem.* No. 3, 73-9(1955)(English summary); cf. preceding abstr.—Steelon is dissolved over 3 min. in 80% HCO_2H at 20°, 4% of the *N*-hydroxymethyl deriv. of Steelon is added together with 1% $NaHCO_3$ in 87% EtOH at 75°. After 1-2 min. at the high temp., the material is quenched to 20° and treated with 6% HCl. The CO_2 development cracks the surface of the fiber, to give the desired loss of luster.

Werner Jacobson

6 3 may

(2)

CHRZCZONOWICZ S.

4

Improving Steelon fibers. Stanisław Chrzczonowicz (Inst. Technology, Łódź, Poland). *Zeszyty Nauk. Politech. Łódz. No. 9, Chem.* No. 3, 81-91(1965)(English summary).—Steelon can be delustered by aid of 3 methods, which apply also to staple fiber: (1) Steelon (1 g.) is treated at 20° with a soln. of 10–20 g. $CaCl_2$ in 100 ml. EtOH or MeOH, from 25 min. to 12 hrs., (2) method 1 is used, followed by a 2% NH_4F bath for 2 min. and (3) the $CaCl_2$ bath is followed by a 2% $BaCl_2$ bath and by a 2% Na_2SO_4 bath. W. J.

Chrzanowicz, S. Stanisław

Polymerization of ε-caprolactam in bulk and in solution in the presence of basic catalysts. Stanisław Chrzanowicz (Inst. Technol., Łódź, Poland). Zeszyty Nauk. Politech. Łódz. No. 9, *Chem.* No. 3, 93–6(1955)(English summary); cf. *C.A.* 49, 14371*i*.—The polymerization of ε-caprolactam (I) was studied in bulk and in soln. in xylene (20 g. I in 120 g. xylene) with alk. catalysts, such as KOH + ZnO, NaOH + CaO, or Na + CO_2 (protective gas). Only the results with the latter catalyst are given in more detail. The reaction was run at 100°/13 mm. If the I-Na ratio was increased from 2.0 to 20.3, the av. degree of polymerization increased from 70 to 300. Also, a copolymerization could already be obtained in this way at room temp. with 80 g. I and 20 g. of either 2-vinyl- or 6-methyl-2-vinylpyridine.

CHRZCZONOWICZ, STANISLAU

POLAND / Chemistry of High Molecular Substances. I

Abs Jour : Ref. Zhur. Khimiya, No 3, 1958, 10199

Author : Chrzczonowicz Stanislau

Inst : Not given

Title : Solution Polymerization of -caprolactam in Presence of Na and CO_2 and Bulk Polymerization of the Same in Presence of Basic Prometers.

Orig Pub : Zesz. nauk. Politechn. lodzkiej, 1957, No 15, 65-92

Abstract : The process of ε-caprolactam polymerization (P) in xylol in presence of Na and CO_2 was investigated. The relationship between the degree of polymerization of the produced polyamide and the amount of Na for a given amount of CO_2 was determined. Among the products of the reaction in an anhydrous medium, a mixture of the Na salt of polycaprolactam,

Card 1/2

POLAND / Chemistry of High Molecular Substances. I

Abs Jour : Ref. Zhur- Khimiya, No 3, 1958, 10199

Abstract : $NaHCO_3$ and Na_2CO_3 were isolated. A hypothetical mechanism for the reaction is proposed. Bulk P of caprolactam was investigated in the laboratory. A suspension of the sodium salt of polycaprolactam, $NaHCO_3$, and Na_2CO_3 in xylol; a mixture of NaOH and CaO; and a mixture NaOH and ZnO were used as promoters. The dependence of the degree of polymerization and of the reaction yield upon the amount of promoters and the time of the reaction was determined. The process of caprolactam bulk P in presence of the above-mentioned promoters and NaOH was investigated on a pilot-plant, and the parameters of the process determined. Fibers were spun out of the obtained polyamide resins and their mechanical properties investigated.

Card 2/2

POLAND/Chemistry of High-Molecular Substances. I

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 59760

Author : Tomaszewski Jerzy, Chrzczonowicz Stanislaw
Inst : -
Title : Copolymerization of E-Caprolactam with 2-Vinylpuridine or 2-methyl-, 6-vinylpyridine in the Mass and in Solution

Orig Pub : Zesz. nauk. Politechn. lodzkiej, 1957, No 18, 57-60.

Abstract : The conditions are described of the copolymerization of E-caprolactam with 2-vinylpyridine or with 2-methyl-6-vinylpyridine in the mass and in boiling xylene. The softening temperature of the copolymers obtained and their solubility in H_2SO_4 solutions of various concentration is determined.

Card 1/1

Distr: 4E2c(1) 15

Chemical treatment of polyamide fibers by pyridine derivatives. I. Use of pyridine derivatives in the dyeing process. Stanisław Chrzczonowicz and Bogdan Ostaszewski (Politech. Codz. Poznań). *Zeszyty Nauk. Politech. Łódź. No. 22, Chem.* No. 7, 47–56(1958)(English summary)—Nylon fibers (I) were dyed with acid and chromo-dyes after a treatment with 2-pyridineethanol (II) or poly(2-vinylpyridine) sulfate (III). I were (*a*) treated 10–20 min. at 60 or 82° with 1 or 5% aq. II and dyed in a soln. of $Na_2SO_4.10H_2O$ 10, 4% aq. AcOH 40, and Acid Violet 6B, Amine Red G, or Fast Yellow G, 2%; or (*b*) treated 10 min. at 20° with 5 ml./1 g. I in an aq. soln. contg. H_2SO_4 23 and III 5%, immersed in 4% Na_2CO_3 3 min., rinsed 10 min. with water, and dyed as in (*a*) or in a soln. contg. 85% aq. HCOOH, 4%, instead of AcOH; or (*c*) dyed with addns. of a quaternary deriv. (IV) of III, prepd. (U.S. 2,487,829, *C.A.* 44, 1732*b*) by 38-hr. refluxing of 10 g. III in 100 g. abs. EtOH with 11.9 g. PrBr. The solns. contained dye 1, Na_2SO_4 15, IV 2 or 0, 85% aq. HCOOH 3, and Neolansaltz P (Ciba) (V) 0 or 2%, resp. After 20 min. of dyeing 1% of aq. 85% HCOOH was added and the dyeing was prolonged by 30 min. (*d*) I were dyed, as in (*c*), but with dye content 2%, with Chromechtorange 2G, Chromechtgelb 5G, Chrome Acid Yellow FR, and Blue BRN. After chroming at 65–70° for 0.5 hr., I were treated with 1 g./l. Neovadine AN for 0.5 hr., with 1 g./l. Invadine A.R, and rinsed. (*e*) I pretreated as in (*c*) were dyed as in (*d*). In all cases I were immersed at 30–5° into a dye soln. (50 g./1 g.) which was then slowly heated to boiling and held for 1 hr. II deepened the color but spoiled the yellow, and traces of alc. produced a ppt. in the dyeing bath. III intensified the color more on I than on wood, improved color uniformity and washing-resistance. IV was not inferior to V as a surface active agent and did not reduce the washing resistance. Mech. resistance was but slightly reduced in (*d*) and (*e*). **II. Use of quaternary derivatives of poly(2-vinylpyridine) for static prevention on polyamide fibers.** *Ibid.* 57–68.—The hygroscopic, surface-active, and dissociating quaternary derivs. of poly(2-vinylpyridine) (IVA) are investigated as static-preventing agents for I. The following were prepd. from IVA after French 849,126 (*C.A.* 35, 6365[8]): a *PrBr deriv.* (VI), an *EtBr deriv.* (VII) by a 24-hr. refluxing of 10 g. IVA with 100 g. MeOH and 16 g. EtBr (U.S. 2,487,829, *C.A.* 44, 1732*b*); a *Me deriv.* (VIII) by 14-hr. refluxing of 10 g. IVA with 100 g. anhyd. C_6H_6 and 14.5 g. Me_2SO_4, and a *Me deriv.* (IX) by dissolving 5.25 g. IV in 30 g. $PhNO_2$, adding 5.6 g. Me_2SO_4, boiling 30 min., distg. $PhNO_2$ and H_2O (U.S. 2,484,433, *C.A.* 44, 9729*i*). The solns. contg. VI, VII, VIII, or IX 1–5, $CuCl_2$ 0–0.1, NaCl 0–0.2, glycerol (X) 0–0.5, and II 0–0.5%, were used. In some cases 5% aq. VIII or IX was neutralized with 10% Na_2CO_3 to give neutral solns. (VIIIa, IXa, resp.). The I (1 g.), 40/12 denier, washed at 60° for 15 min. were immersed in a 20-ml. bath at 40 ± 3° for 3 min. and squeezed until the wt. was 2 g. Standard samples of 100 parallel I, 30-cm. long, were electrified by rubbing against glass, and the distance between their lower ends was measured. In untreated I, the sepn. was 20 cm. after 5-fold rubbing; no sepn. was detected after more than 20-fold rubbing of I treated in the following baths: VII 2, $CaCl_2$ 0.5, and X 0.5%; IX 1%, IX 2%; IX 2, NaCl 0.1, and X or II, 0.5%; VIII, 2%; VIII, 5%; VIIIa, 1%; VIIIa, 2%; VIIIa, 2, NaCl 0.2, and X 0.5%; IXa, 1%; IXa, 2%; IXa, 2%, NaCl, 0.2%, and X or II, 0.5%; resp. VI and VII (1 or 2% solns.) were inferior (e.g., 0–5 cm. after 5-fold rubbing). Tensile strength was even slightly higher after treatment; and the properties of I did not change after several months. J. Steckl

JW 1/1

CHRZCZONOWICZ, S.

COUNTRY	: Poland	H-34
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 16 1959, No.	59462
AUTHOR	: Chrzczonowicz, S. and Ostaszewski, B.	
INST.	: Not given	
TITLE	: The Chemical Treatment of Polyamide Fibers with Pyridine Derivatives. Investigation of the Utilization of Pyridine Derivatives as Assistants in the Dyeing of Polyamide Fibers	
ORIG. PUB.	: Zesz Nauk Politechn Lodzkiej, No 22, 47-56 (1958)	

ABSTRACT : Experiments with the utilization of 2-(β-hydroxyethyl)-pyridine (I), poly-2-vinylpyridinesulfate (II), and of quaternary derivatives of II (III) in the dyeing of nylon with acid and with mordant-to-wool dyes are described. The authors have shown that in the presence of I the intensity of the color is increased but the hue deteriorates; II leads to the production of a uniform intense color and improves fastness to wear; III has an effect analogous to that of Neolan salt (Ciba).

CARD: 1/2

COUNTRY : Poland
CATEGORY : H-34

ABS. JOUR. : RZKhim., No. 16 1959, No. 59462

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Preliminary treatment with II followed by dyeing in a bath containing III improves fastness to wear. Treatment with the compounds studied does not affect the mechanical strength of the fibers. Processes for the production of I, II, and III are indicated.

I. Fodiman

CARD: 2/2

CHRZCZONOWICZ, S.

Distr: 4E2c(1) 1

Polymerization of ε-caprolactam. S. Chrzczonowicz. Pol. 41,536, July 20, 1958. Polycaprolactam is prepd. from the Na salt of caprolactam suspended in a nonpolar solvent under CO_2. For example, 1.8 g. Na was added to 40 g. ε-caprolactam (I) dissolved in 100 g. of pure xylene. The mixt. was heated to 142° and dry CO_2 passed through for 10–20 min. at a rate of 40–60 ml./min. The ppt. was filtered, washed with xylene, and dried at 105°, giving 37 g. of an amorphous polyamide of av. polymerization degree 200. The filtrate contg. 8 g. of I in about 95 ml. of xylene was supplied with more I and Na and polymerization was repeated.

K. Bojanowska

CHRZCZONOWICZ, S.

Histr: 4E2o(1) 1

Polymerization of ε-caprolactam and ζ-enantholactam in nonpolar solvents. Stanisław Chrzczonowicz, Mirosław Włodarczyk, and Bogdan Ostaszewski (Inst. Technol., Łódź, Poland). *Makromol. Chem.* 38, 159–67(1960)(in English).—The dependence of the polymerization progress of ε-caprolactam (I) and ζ-enantholactam (II) on the temp. and the dependence of the polymerization degree of I on the amt. of catalyst and polymerization temp. were detd. I was purified from the oxime by vacuum distn. with 1% NaOH and dried over P_2O_5. II was prepd. from suberone and purified by fractionation. Hexane, heptane, benzene, naphtha, and their mixts. were used as solvents. Polymerization of I does not take place below 110°, the products being sol. in H_2O. Polymerization of I in a solvent and in the presence of the Na salt of I and CO_2 occurs above 110°. The mean degree of polymerization of the produced polymers rises rapidly to a value of 400 at 160° as the process temp. is increased.

Arthur Lyem

5
2-JA1(HB)(1109)
1

CTK
11
L1

CHRZCZONOWICZ, S.; WLODARCZYK, M.

The structure of end-groups of polycarprolactam. Chain transfer in solvent polymerization of ε-caprolactam. Bul chim PAN 9 no.9: 585-587 '61.

1. Laboratory of Plastics Technology, Department of Organic Technology, Technical University, Lodz. Presented by T. Urbanski.

CHRZCZONOWICZ, S.; LASOCKI, Z.

The rates of polycondensation of dimethylsilanediol. Bul chim PAN 9 no.9:589-590 '61.

1. Laboratory of Plastics Technology, Department of Organic Technology, Technical University, Lodz. Presented by T. Urbanski.

CHRZCZONOWICZ, S.; LASOCKI, Z.

Equilibria and rates of polycondensation of dimethylsilanediol in methanol. Bul chim PAN 9 no.9:591-593 '61.

1. Laboratory of Plastics Technology, Department of Organic Technology, Technical University, Lodz. Presented by T. Urbanski.

S/081/62/000/004/087/087
B102/B101

AUTHORS: Chrzczonowicz, Stanisław, Lasocki, Zygmunt

TITLE: Bifunctional silicone monomers; hydrolysis and condensation. IV. Hydrolysis of ω,ω'-dimethoxy-(dialkylpolysiloxanes)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 673, abstract 4R146 (Roczn. chem., v. 35, no. 1, 1961, 127 - 133)

TEXT: A study has been made of the kinetics of hydrolysis of the first six members of the homologous series of ω,ω'-dimethoxy(dimetylpolysiloxane) and of the first five members of the series of ω,ω'-dimethoxy(methylethyl-polysiloxanes) in methanol when the neutrality of the reaction medium has been accurately maintained. The rate of hydrolysis has been determined by the method of taking samples with a certain degree of conversion. The most considerable difference in the kinetics of hydrolysis has been observed with the monomers of both series (n=1). For $n \leqslant 4$ the kinetic curves coincide. It is shown that the resistance to hydrolysis of the methoxyl end groups is much higher in polysiloxanes than in monomers. For communication III cf. RZhKhim, 1961, 20Zh19. [Abstracter's note: Complete translation.]

Card 1/1

S/081/62/000/015/037/038
B171/B101

AUTHORS: Chrzczonowicz, S., Lasocki, Z.

TITLE: The rates of polycondensation of dimethylsilanediol

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1962, 634, abstract 15R48 (Bull. Acad. polon. sci. Ser. sci. chim., v. 9, no. 9, 1961, 589-590)

TEXT: The polycondensation (PC) of dimethylsilanediol (I) in dioxane at 25°C ± 0.05, in the presence of HCl as catalyst, is a second order reaction in relation to the ≡SiOH groups and a first order reaction in relation to HCl. The slowing down of the rate of PC when 25-40% of silanol groups have reacted is assumed to be due to the lower reactivity of OH groups in the polysiloxane already generated as compared with the reactivity of the monomer silanediol This hypothesis is confirmed by the fact that the rate of PC of dimer tetramethyldisiloxanediol is 35 times lower than that of I. The subsequent increase in the rate of PC, in comparison with that calculated, can apparently be explained by the effect of water, produced during the reaction on the catalytic action of HCl. [Abstracter's note: Complete translation.]

Card 1/1

S/081/62/000/015/038/038
B171/B101

AUTHORS: Chrzczonowicz, S., Lasocki, Z.

TITLE: Equilibria and rates of polycondensation of dimethylsilanediol in methanol

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1962, 636, abstract 15R63 (Bull. Acad. polon. sci. Sér. sci. chim., v. 9, no. 9, 1961, 591-593)

TEXT: The equilibrium constant of the polycondensation of dimethylsilanediol in CH_3OH, $K=K_2/K_1 = [\equiv Si - OSi \equiv]/[\equiv SiOCH_3]^2[HOH]$ amounting to 17.5 at 25°C + 0.05, is independent of the initial proportion of reactants and of the catalyst used (HCl, NaOH, KOH). The initial rate of a reaction catalyzed by the acid is proportional to the product $[\equiv SiOCH_3]^2[HOH][HCl]$ and the subsequent fall in the rate of reaction to about 10) is caused mainly by the reduced reactivity of OH groups in the growing polysiloxane chains. In the presence of alkalis, the reaction of polycondensation at its inital stage can be represented by a linear equa-

Card 1/2

CHRZCZONOWICZ,S.; MICHALSKA,Z.

Application of polymers and copolymers of vinyl pyridines.
Polimery tworz wielk 7 no.5:162-165 My '62

1. Zaklad Technologii Tworzyw Sztucznych, Politechnika, Lodz.

CHRZCZONOWICZ, Stanislaw; LASOCKI, Zygmunt

Bifunctional silicone monomers; hydrolysis and condensation. VI. The rates of polycondensation of dimethylsilanediol in methanol. Rocz chemii 36 no.3:433-444 '62.

1. Department of Organic Technology, Laboratory of Technology of Plastics, Institute of Technology, Lodz, and Department of Organic Synthesis, Polish Academy of Sciences, Lodz.

CHRZCZONOWICZ, Stanislaw; LASOCKI, Zygmunt

Bifunctional silicone monomers: hydrolysis and condensation. V. Rate of polycondensation of dimethylsilanediol. Rocz chemii 36 no.2:275-284 '62.

1. Department of Organic Technology, Laboratory of Technology of Plastics, Institute of Technology, Lodz, and Department of Organic Synthesis, Polish Academy of Sciences, Lodz.

CHRZCZONOWICZ, Stanislaw; CHOJNOWSKI, Julian

Bifunctional silicone monomers; hydrolysis and condensation. VII. Rocz chemii 36 no.9:1293-1302 '62.

1. Laboratory of Plastics Technology, Institute of Technology, Lodz, and Laboratory of Organic Synthesis, Polish Academy of Sciences, Lodz.

CHRZCZONOWICZ, S.; MARCINKOWSKI, M.

Studies on the mechanism of polymerization of η - aminocaprylic acid lactam in the presence of sodium and carbon dioxide as activators. Pt. 6. Bul chim PAN 12 no. 2: 111-115 '64

1. Laboratory of Technology of Plastics, Department of Organic Technology, Technical University, Lodz. Presented by T. Urbanski.

CHRZCZONOWICZ, Stanislaw; CHOJNOWSKI, Julian

Bifunctional silicon monomers; hydrolysis and condensation. Pt.8. Roczn chemii 36 no.10:1459-1463 '62.

1. Laboratory of Plastics Technology, Institute of Technology, Lodz and Laboratory of Organic Synthesis, Polish Academy of Sciences, Lodz.

CHRZCZONOWICZ, S.; MARCINKOWSKI, M.

Studies on the mechanism of polymerization of - aminocaprylic acid lactam in the presence of sodium and carbon dioxide as activators. Pts. 4-5. Bul chim PAN 12 no. 1:31-39 '64.

1. Institute of Technology of Plastics, Department of Organic Technology, Technical University, Lodz. Presented by T. Urbanski.

CHRZCZONOWICZ, S.; OSTASZEWSKI, B.

Polymerization of ζ-enantholactam in nonpolar solvents. Pts.3-4. Bul chim PAN 9[i.e. 12] no.9:593-601 '64.

1. Technological Laboratory of Plastics of the Department of Organic Technology of Lodz Technical University. Submitted June 6, 1964.

CHRZCZONOWICZ, S.; OSTASZEWSKI, B.; REIMSCHUSSEL, W.

Polymerization of $\mathcal{L}$-enatholactam in nonpolar solvents. Pt.5. Bul chim PAN 12 no.10:691-693 '64.

1. Technological Laboratory of Plastics of the Department of Organic Technology of Lodz Technical University. Submitted June 29, 1964.

PHASE I BOOK EXPLOITATION SOV/4983

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii, SSSR, Moskva, 14-18 iyunya 1960 g; doklady i avtoreferaty. Sektsiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Papers and Summaries) Section II. [Moscow, Izd-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interpolation. There are summaries in English, French and Russian. No personalities are mentioned. References follow each article.

AVAILABLE: Library of Congress

19

Vinyl Compounds

CHRZESZCZYK, M.

4247

666.193 : 662.998.002.2(438)

Chrzeszczyk M. Basalt Wool, — a New Insulating Material.

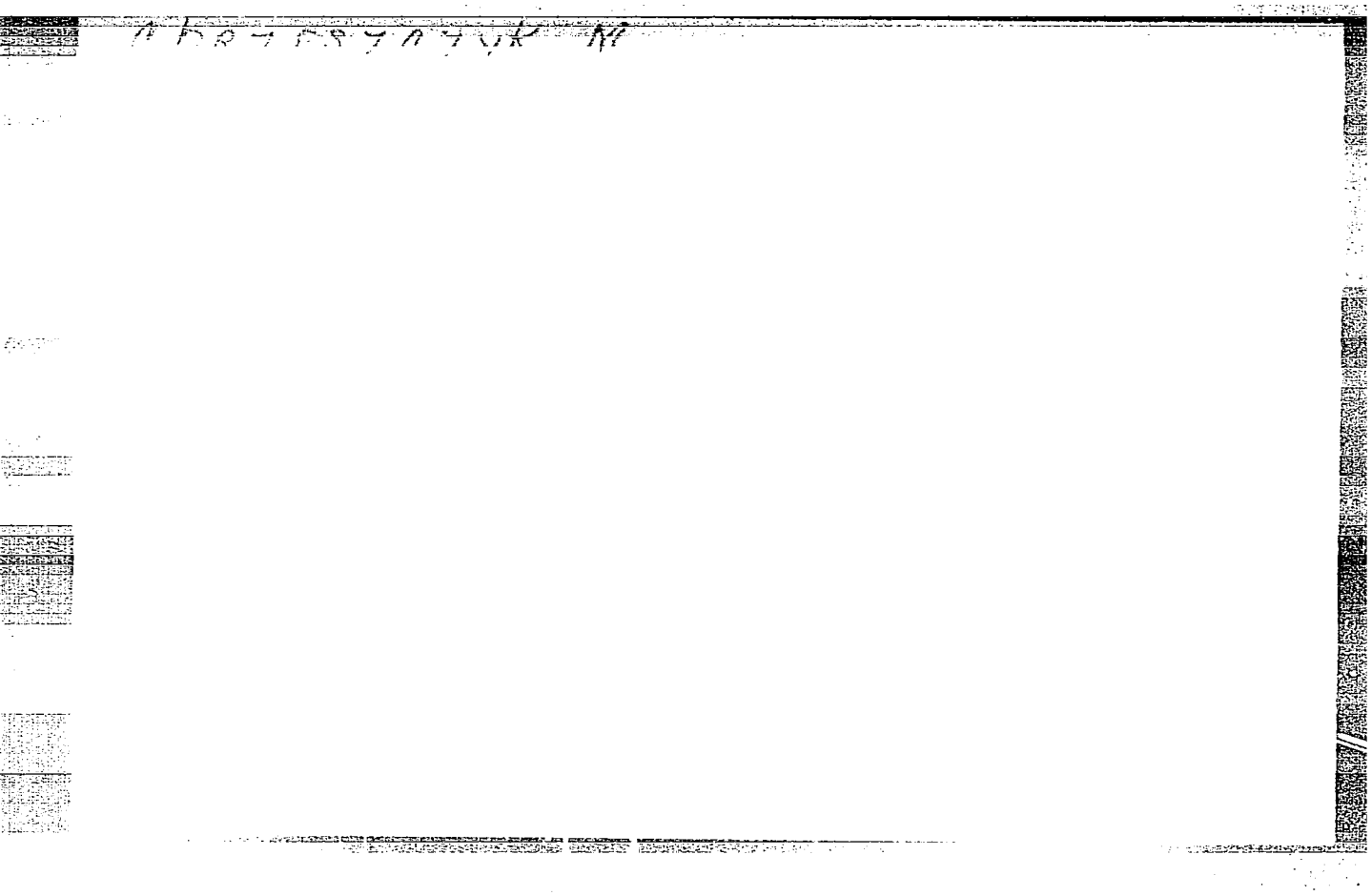
„Wełna bazaltowa — nowy materiał izolacyjny", Szkło i Ceramika. No. 3, 1955, pp. 47—52, 12 figs., 3 tabs.

A discussion of the process of production of basalt wool developed in Poland. This consists in blowing the melted raw material by compressed steam or air, and can be divided into four stages: 1) preparation of the raw material and transporting it to the furnace; 2) melting the raw material in the furnace; 3) blowing the molten raw material; and 4) receiving the ready product. The fibres of the basalt wool now produced in Poland are thinner than those of slag wool and, consequently, also possess better heat-absorbing properties. The most noteworthy industrial uses of basalt wool are listed.

CHRZESZCZYK, M.

27 15

Determination of iron oxide in glass and raw materials. J. Berkiewicz and M. Chrzeszczyk. *Szkło i Ceram.* 1955, No. 8, 182; *Polish Tech. Abstr.* No. 3, Abstr. No. 1420 (1956).—Fe was detd. as thiocyanate by using Pulfrich's and "Viscomat" photoelec. colorimeters after silica had been filtered off. The results with the 2 colorimeters were more or less in agreement. A disproportionate error in the method arises, however, when Fe is detd. in solns. contg. 0.002 mg. of Fe_2O_3/cc., and that is the concn. found in practice in solns. prepd. from substances contg. about 0.05% Fe_2O_3 (1 g./250 cc. of the soln.) K. L. S.



CHRZSNOWSKI, M.

CHRZSNOWSKI, M. The application of radiosisotopes in industry. p. 65.

Vol. 29, no. 2, 1956
MECHANIK
TECHOLOGY
Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, 1957

CHRZESZCZYK, M.; KARCH, Z.

Tasks and work of a factory laboratory in the glass industry. Pt. 2. Chemical laboratory. p. 127.
(Szklo I Ceramika, Vol. 8, No. 5, May 1957, Krakow, Poland)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

POLAND / Chemical Technology, Chemical Products and Their Application. Ceramics. Glass. Binding Materials. Concrete. H-13

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 16245

Author : Chrzeszczyk, M.
Inst : Not given
Title : Glass Fiber - Production, Properties and Application

Orig Pub : Szklo i ceram., 1958, 9, No 6, 159-164, No 7, 190-194

Abstract : Because of its high mechanical strength, fire-proof properties, low heat and sound conductivities, low electrical conductivity, chemical stability, etc., glass fiber has found a wide range of applications in various sectors of industry. The world production of fiber glass in 1957 comprised approx. 300,000 tons. The article describes various manufacturing methods of glass fiber, including drawing from dies and glass rods, blowing and

Card 1/2

H-36

POLAND / Chemical Technology, Chemical Products and Their Application. Ceramics. Glass. Binding Materials. Concrete. H-13

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 16245

manufacturing in accordance with the Hager's method. The data pertaining to physical and mechanical properties of fiber glass are also presented. They include: bulk and true densities, mechanical strength, its dependency on the fiber diameter, absorption of water, heat resistance, electro-, thermo-, and sound-insulating properties, friction coefficients, resistance to atmospheric corrosion, and aging. In the conclusion, the present status of the fiber glass manufacture in Poland is reviewed. The prospective development of this industry is discussed. The bibliography includes 4 titles. -- L. Sedov

Card 2/2

KRALOVA, L.; CHRZOVA, V.

Chronic cardiac aneurysm; a review of the occurrence in pathological material over the past eleven years. Rev. Czech. M. 4 no.3:225-232 1958.

1. Second Clinic of Internal Diseases, Charles University, Prague. Director: Prof. F. Herles.
(HEART, aneurysm
incidence & postmortem pathol.)

CHRZOVA, V.

SURNAME, Given Names

Country: Czechoslovakia

(8)

Academic Degrees: [not given]

Affiliation:

Source: Prague, Rozhledy v Tuberkulose a v Nemocech Plicnich, Vol XXI, No 6, July 61, pp 456-460.

Data: "Bilateral Extensive Pneumocytic Pneumonia in a Male Aged 30 Years Suffering From Malignant Lymphogranuloma."

Authors:

BRAUN, A., [presumably] First Institute of Pathological Anatomy, KU [Karlova universita; Charles University] (1. patologickoanatomicky ustav KU), Prague; Director: Prof Dr. B. BEDNAR.

DRAB, K., presumably First Institute of Pathological Anatomy, KU, Prague.

CHRZOVA, V., [presumably] Second Internal Clinic, KU (II. interni klinika KU), Prague; Director: Prof Dr F. HERLES.

KRALOVA, L., [presumably] Second Internal Clinic, KU, Prague.

219

GPO 981643

CHTCHYAN, G. O., Candidate Tech Sci (diss) -- "Investigation of the economy of a Diesel tractor as a function of its load (The example of the KDP-35 tractor)". Yerevan, 1959. 22 pp (Min Agric USSR, Leningrad Agric Inst), 175 copies (KL, No 24, 1959, 143)

S/145/62/000/005/002/008
D262/D308

AUTHOR: Chtchyan, G. O., Candidate of Technical Sciences

TITLE: Investigation of the stable operating condition ranges for free piston engines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 5, 1962, 21-25

TEXT: The author describes a series of experiments conducted to investigate working possibilities of free piston diesel-compressors operating under small loads, or running idle. A standard diesel compressor ДК-2 (DK-2) and a low pressure experimental engine ДКНД (DKND) were employed, and loading characteristics were obtained using three different methods of fuel consumption control: (a) standard rack gear of the fuel pump, (b) special screw device to obtain smooth movement of the pump gear, and (c) specially designed device including a spring operated

Card 1/2

Investigation of the... S/145/62/000/005/002/008
D262/D308

"maximeter" placed between the fuel pump and the injector to regulate the amount of fuel. The results of the experiments are presented graphically and the following conclusions are reached: The existing opinion that free-piston engines can work under small loads and running idle is incorrect. That they cannot is due to the defects of the fuel pump only, and not because of any organic fault in the free piston engine. With a suitably designed fuel system, fuel consumption can be lowered, output reduced to 11%, and idle running secured at 0.062 g of fuel per cycle (from experimental data for DK-2 and DKND). There are 7 figures.

ASSOCIATION: Armyanskiy filial VNII EM (Armenian Branch of the VNII EM)

Card 2/2

CHTCHYAN, G.O., knad.tekhn.nauk

Investigating the ranges of steady conditions of a free-piston engine. Izv.vys.ucheb.zav.; mashinostr. no.5:21-25 '62. (MIRA 15:10)

1. Armyanskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta elektromekhaniki.
(Diesel engines)

CHTETSOV, V.P.

Factor analysis and its use for studying the relation of some anthropometric characters of Russians and Buryats. Prim. mat. metod. v biol. no.2:100-106 '63.
(MIRA 16:11)

CHETSOV, V.P. (Moscow)

"Factorial Analysis and Its Use in the Study of Correlation of Some Anthropometric Indexes of Russians and Buryats"

Report presented at the 3rd Conference on the use of Mathemetics in Biology, Leningrad University, 23-28 Jan. 1961.
(Primeneniye matematicheskikh Metodov v Biologii. II, Leningrad, 1963 pp 5-11)

LITOVINOVA, N. Yu.; UTKINA, M. I.; CHTETSOV, V. P.

"Morfologicheskaya kharakhteristika pekotorykh grupp sportsmenov."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

CHTETSOVA, V.M., kand.med.nauk

Phagocytic activity of the leukocytes. Pediatriia 38 no.12: 52-54 '60. (MIRA 14:2)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo institut okhrany materinstva i mladenchestva (dir. R.A. Malysheva).
(PHAGOCYTOSIS)